LITHOGRAPHIC ANTIREFLECTIVE HARDMASK COMPOSITIONS AND USES THEREOF

Abstract of the Disclosure

Compositions and techniques for the processing of semiconductor devices are provided. In one aspect of the invention, an antireflective hardmask composition is provided. The composition comprises a fully condensed polyhedral oligosilsesquioxane, $\{RSiO_{1.5}\}_n$, wherein n equals 8; and at least one chromophore moiety and transparent moiety. In another aspect of the invention, a method for processing a semiconductor device is provided. The method comprises the steps of: providing a material layer on a substrate; forming an antireflective hardmask layer over the material layer. The antireflective hardmask layer comprises a fully condensed polyhedral oligosilsesquioxane, $\{RSiO_{1.5}\}_n$, wherein n equals 8; and at least one chromophore moiety and transparent moiety.